



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D212-664-201
Job Sheet 190172



Part No: D212-664-201

Job Qty: .1 pcs

Part Name: Aft Crosstube - High



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/5/19

Job Tracking No:

Created By: Jesse White

Due Date: 3/8/19

Description: SIOP

Type: Stock

Note: IIN-D212-664 REV.J/ D212-664-241 REV E IPP Rev:E 04.02.16 Reformat K/DS IPP Rev:F 06-03-29 Remove
Comments on Pick List JLM IPP Rev:G 07-04-30 As per Rev C JLM IPP Rev:H 08-05-22 up date Qty of rubber
cushion DD ver:EC IPP REV:I 14.05.27 AS PER ECN14-570 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Run Hrs Hrs	Workcenter/Supplier	Sign-off
110	Packaging 1 - Pick Kit	1 pcs		3/8/19	0.00 0.00	Packaging 1 - 1	

Scan
Received from
Quality.
Misc. NCR wp's
Not Sorted



Container No: \$156699



Part: D212-664-201

Job No: 190172

Serial No/Batch: \$156699

Revision: E/J

Inspector:

Exp Date:

Instructions: TC STC SH01-9 Issue 3, FAA STC SR012, EASA STC

Dart Aerospace
1270 Aberdeen St
Hawkesbury, ON K6A
CANADA
TEL: 1 613 632-5200
Email: sales@dartae.com
www.dartaerospace.com

Packaging 1 - 20
Packaging 1 - 21
Packaging 1 - 22
Packaging 1 - 23
Packaging 1 - 24
Packaging 1 - 25
Packaging 1 - 26
Packaging 1 - 27
Packaging 1 - 28
Packaging 1 - 29
Packaging 1 - 30

GP 19-0276

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P.T.O.

112 Packaging 1-1 - Pick Kit - B4B pcs	3/8/19	0.00 0.00	Packaging 1 - 31	
			Packaging 1 - 32	
			Packaging 1 - 33	
			Packaging 1 - 34	
			Packaging 1 - 35	
			Packaging 1 - 36	
			Packaging 1 - 1 - B4B	
			Packaging 1 - 2 - B4B	
			Packaging 1 - 3 - B4B	
			Packaging 1 - 4 - B4B	
			Packaging 1 - 5 - B4B	
			Packaging 1 - 6 - B4B	
			Packaging 1 - 7 - B4B	
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			Packaging 1 - 9 - B4B	
			Packaging 1 - 10 - B4B	
			Packaging 1 - 11 - B4B	
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			Packaging 1 - 13 - B4B	
			Packaging 1 - 14 - B4B	
			Packaging 1 - 15 - B4B	
			Packaging 1 - 16 - B4B	
			Packaging 1 - 17 - B4B	
			Packaging 1 - 18 - B4B	
			Packaging 1 - 19 - B4B	
			Packaging 1 - 20 - B4B	
			Packaging 1 - 21 - B4B	
			Packaging 1 - 22 - B4B	
			Packaging 1 - 23 - B4B	
			Packaging 1 - 24 - B4B	GP 19-02-27
			Packaging 1 - 25 - B4B	
			Packaging 1 - 26 - B4B	
			Packaging 1 - 27 - B4B	
			Packaging 1 - 28 - B4B	
			Packaging 1 - 29 - B4B	
			Packaging 1 - 30 - B4B	
			Packaging 1 - 31 - B4B	
			Packaging 1 - 32 - B4B	
			Packaging 1 - 33 - B4B	
			Packaging 1 - 34 - B4B	
			Packaging 1 - 35 - B4B	
			Packaging 1 - 36 - B4B	
120 Crosstubes - Bend - 2 - B4B	3/8/19	0.00 4.44	Crosstubes - Bend - B4B	GP 19-02-27
130 QC 15	3/8/19	0.00 0.00	QC 15 - 12	
			QC 15 - 3	
			QC 15 - 38	
			QC 15 - 47	
			QC 15 - 49	
			QC 15 - 58	
			QC 15 - 9	
140 Crosstubes - 2 - B4B	3/8/19	0.00 0.00	Crosstubes - 1 - B4B	MAR 19 2019 10 68
			Crosstubes - 2 - B4B	
			Crosstubes - 3 - B4B	GP 19-03-25
			Crosstubes - 1 - B4B	
			Crosstubes - 2 - B4B	
			Crosstubes - 3 - B4B	
150 Crosstubes - 3 - B4B	3/8/19	0.00 1.00	QC 7 - 10	GP 19-03-25
			QC 7 - 13	
160 QC 7	3/8/19	0.00 0.00		

				QC 7 - 14						
				QC 7 - 15						
				QC 7 - 17						
				QC 7 - 18						
				QC 7 - 19						
				QC 7 - 2						
				QC 7 - 28						
				QC 7 - 3						
				QC 7 - 30						
				QC 7 - 34						
				QC 7 - 36						
				QC 7 - 37						
				QC 7 - 38						
				QC 7 - 41						
				QC 7 - 47						
				QC 7 - 48						
				QC 7 - 51						
				QC 7 - 58						
				QC 7 - 59						
				QC 7 - 6						
				QC 7 - 60						
				QC 7 - 9						
				QC 7 - 68		DAS				
				QC 7 - 50		MAR 27 2019 68				
				QC 7 - 67		9-89				
170 QC 5	1 pcs	3/8/19	0.00 0.00	QC 5 - 10						
				QC 5 - 12						
				QC 5 - 17						
				QC 5 - 18						
				QC 5 - 19						
				QC 5 - 22						
				QC 5 - 24						
				QC 5 - 3						
				QC 5 - 38						
				QC 5 - 42						
				QC 5 - 43						
				QC 5 - 49						
				QC 5 - 51						
				QC 5 - 58						
				QC 5 - 68		DAS				
				QC 5 - 9		MAR 27 2019 68				
				QC 5 - 50		9-89				
				QC 5 - 30						
				180 Outsource - 2 - NDT per QSI038	1 pcs	3/8/19		SKY002-VC		DAS
				190 Packaging 2-1 - Receive - B4B	1 pcs	3/8/19	0.00 0.00	Packaging 2 - 1 - B4B	710:093007	MAR 28 2019 13
Packaging 2 - 2 - B4B		9-89								
Packaging 2 - 3 - B4B										
Packaging 2 - 5 - B4B										
Packaging 2 - 4 - B4B										
Packaging 2 - 6 - B4B										
Packaging 2 - 7 - B4B										
Packaging 2 - 8 - B4B										
Packaging 2 - 9 - B4B										
Packaging 2 - 10 - B4B										
Packaging 2 - 11 - B4B										
Packaging 2 - 12 - B4B										
Packaging 2 - 13 - B4B										
Packaging 2 - 14 - B4B										

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					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
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					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
200 QC 5	1 pcs	3/8/19	0.00 0.00		QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
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					QC 5 - 38	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
210 Spray Paint - 2 - B4B	1 pcs	3/8/19	0.00 1.47		Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
					Spray Paint - 4 - B4B	
220 QC 14	1 pcs	3/8/19	0.00 0.00		QC 14 - 15	
					QC 14 - 2	
					QC 14 - 34	
					QC 14 - 38	
					QC 14 - 41	
					QC 14 - 51	
					QC 14 - 58	
					QC 14 - 59	
					QC 14 - 9	
					QC 14 - 68	
230 Crosstubes - 4 - B4B	1 pcs	3/8/19	0.00 1.47		Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	
240 QC 5	1 pcs	3/8/19	0.00 0.00		QC 5 - 10	
					QC 5 - 12	

				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
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				QC 5 - 24	
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				QC 5 - 42	
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				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
250 Packaging 1-2 - Pick Kit - B4B	1 pcs	3/8/19	0.00 0.00	Packaging 1 - 1 - B4B	
				Packaging 1 - 2 - B4B	
				Packaging 1 - 3 - B4B	
				Packaging 1 - 4 - B4B	
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				Packaging 1 - 22 - B4B	
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				Packaging 1 - 24 - B4B	
				Packaging 1 - 25 - B4B	
				Packaging 1 - 26 - B4B	
				Packaging 1 - 27 - B4B	
				Packaging 1 - 28 - B4B	
				Packaging 1 - 29 - B4B	
				Packaging 1 - 30 - B4B	
				Packaging 1 - 31 - B4B	
				Packaging 1 - 32 - B4B	
				Packaging 1 - 33 - B4B	
				Packaging 1 - 34 - B4B	
				Packaging 1 - 35 - B4B	
				Packaging 1 - 36 - B4B	
260 QC 4	1 pcs	3/8/19	0.00 0.00	QC 4 - 26	
				QC 4 - 28	
				QC 4 - 38	
				QC 4 - 42	
				QC 4 - 58	
				QC 4 - 6	
				QC 4 - 69	

DAS
APR 29 2019 68
9-89

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DAS
APR 29 2019 68
9-89

270 Packaging 3-1 - Stock - B4B	1 pcs	3/8/19	0.00 0.00	QC 4 - 9	DAS
				QC 4 - 46	46 610Z 0 0 8dv
				Packaging 3 - 1 - B4B	9/88
				Packaging 3 - 2 - B4B	46 APR 3 0 2019
				Packaging 3 - 3 - B4B	9-88
				Packaging 3 - 4 - B4B	
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				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
275 DC - 1 - B4B	1 pcs	3/8/19	0.00 0.00	DC - 1 - B4B	
				DC - 2 - B4B	
280 QC 21 - FG	1 pcs	3/8/19	0.00 0.00	QC 21 - FG - 21	APR 3 0 2019
				QC 21 - FG - 70	
				QC 21 - SA - 53	APR 3 0 2019

Part Op 120 - NC Bend Crosstube (CNC Alpha 160 Bender)*VERF SET-UP BEFORE BENDING BY: ***
Descriptions: Bend tube as per Dwg D212-664-241 using CNC bender program 212-aft
130 - QC15- Crosstube Dimensional Check)
140 - 1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550, DT8551, drill table DT8577 and locate tower holes #8 as per QSI0010. 2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes. 3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241 4- ***WEAR LATEX GLOVES HANDLING CROSSTUBE.*** Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241
150 - HandFinish5 (Crosstubes Chemical Conversion) ***IMMEDIATELY AFTER GRINDING***
160 - QC7-1 (QC7-Inspect Chemical Conversion Coat)
170 - (QC5- Inspect part completeness to step on W/O)
180 - ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.*** Issue P/O: _____ LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2
190 - (Receive & Inspect for Damage & Mat'l Certs) **WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.***
200 - QC5- Inspect part completeness to step on W/O) ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE.*** Inspect for damage & ensure results are as per Dwg D212-664-241
210 - Spray Paint (Spray Paint / NDT Room) *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
220 - (QC14- Inspect Spray Paint) Then, Wrap in plastic bag to protect from scratches
230 - (Crosstube) *****LAY DOWN CORSTUBE ON TABLE AND PUT DT10302 PINS IN SADDLE HOLE FACING UP,

USE HOLE IN TAPE MESURE TO PUT IN PINS FOR LOCATING CENTER OF CROSSTUBE. ***** 1- Abrade mating surfaces of support and crosstube with 180 grit sandpaper, clean the area with MEK or equivalent as per dwg 2- Install supports with Proseal 890 per D212-664-241 and QSI 015 A/R Proseal 890 Batch: 5346134
EXP: 19-10 PROSEAL CURE TIME 72 HOURS: Start: 19-4-24
Finish: 19-4-27 3- Install clamps with rubber cushion (ENSURE CLAMPS ARE INSTALL ON TOP SIDE OF CROSSTUBE) using DT9565 as per Dwg D212-664-241. ***Torque all clamps to 80-100 IN-LBS ***
240 - QC5 (QC5- Inspect part completeness to step on W/O) ***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 72HOURS AS PER DWG.***
250 - Packaging1-3 (Pick Kit)
260 - QC4 (QC4- 100% Inspect kits for completeness ***VERIFY BY _____ BATCH # TO MATCH W/O
270 - Packaging3-1 (Identify as per dwg & Stock Location: _____) Identify and pack for shipping as per PPP D212-664-201 Location : FG098
275 - (Document Control) Photocopy bluefile and create labels as per PPP D212-664-201 CHG006
280 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D212-664-201TRN	Crosstube Turning Detail	1 pcs (1 ea)	110-Packaging 1 - Pick Kit	152 408
D2940-1	Support	2 Ea (2 ea)	230-Crosstubes - 4 - B4B	
D3595-063-530	Rubber Cushion 0.63" Wide X 5.30" Long	4 pcs (4 ea)	230-Crosstubes - 4 - B4B	
MS21920-28	Clamp	4 Ea (4 ea)	230-Crosstubes - 4 - B4B	
AN6-40A	3/8-24 Bolt X 3" Long	4 Ea (4 ea)	250-Packaging 1-2 - Pick Kit - B4B	5107752
AN6-41A	Bolt	2 Ea (2 ea)	250-Packaging 1-2 - Pick Kit - B4B	5038736
D3428-1	Placard	1 pcs (1 ea)	250-Packaging 1-2 - Pick Kit - B4B	5112841
MS21042L6	Nut	6 Ea (6 ea)	250-Packaging 1-2 - Pick Kit - B4B	5149182
NAS1149D0663J	Washer	18 Ea (18 ea)	250-Packaging 1-2 - Pick Kit - B4B	5135105

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Packaging 1 - Pick Kit	D212-664-201TRN	1	0	0
230-Crosstubes - 4 - B4B	D2940-1	2 (512499)	12	0
	D3595-063-530	4 (5117745)	16	0
	MS21920-28	4 (5131475)	66	0
250-Packaging 1-2 - Pick Kit - B4B	AN6-40A	4	112	0
	AN6-41A	2	69	0
	D3428-1	1	42	0
	MS21042L6	6	332	0
	NAS1149D0663J	18	992	0

Part Specifications

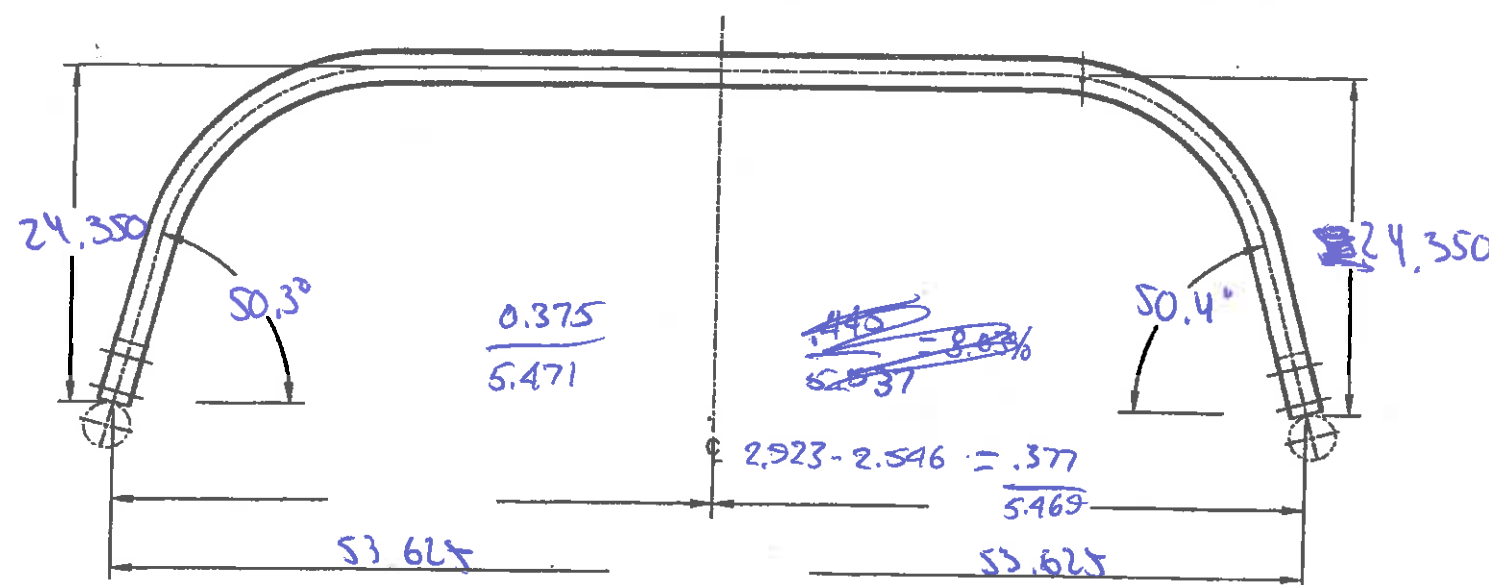
Specifications could not be found.

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4516

DART AEROSPACE LTD		Work Order:	
Description: Crosstube High Aft (205/212)		Part Number:	D212-664-201
Inspection Dwg: D212-664-241 Rev: E		Page 1 of 1	

Required Dimension	Min	Max
Height	24.17	24.43
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70
Bending Passes	5	--
Crushing	--	7.2%



	Side A	Side B
Bending Passes	21	19
Crushing	6.85%	6.9
Comments		

QC15 Inspection	DAS
Date	MAR 19 2019
	68
	9-89

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. C	KJ/JLM	
C	10.04.01	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing dimensions	KJ	
E	14.07.08	Crushing percentage revised	KJ	

Item	Qty -241	Qty -241B	Part Number	Description
1	X		D212-864-241	CROSSTUBE ASSEMBLY (205/212 HIGH AFT)
2	X		D212-864-241B	CROSSTUBE ASSEMBLY (214 HIGH AFT)
3	1	1	D8008-129	CROSSTUBE
4	2		D2840-1	SUPPORT
5	4	4	D3595-083-530	RUBBER CUSHION
6	2	2	D5016-1	SUPPORT
7	4	4	MS21920-28	CLAMP (OR MS21920-30)
8	AR	AR	PROSEAL 880 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6008-129
 - 2) FINISH: a) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
b) PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
c) MASK INSIDE OF CROSSTUBE AS SHOWN (ZN C8-2 / C8-3, HATCHED AREA)
d) PAINT OUTSIDE PER DART QSI 005 4.2
e) REMOVE MASKING AND APPLY WHITE CLEAR COAT
 - 3) TOLERANCES ARE PER DART QSI 015 UNLESS OTHERWISE NOTED.
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
 - 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-864-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
 - 7) WEIGHT: D212-864-241/241B = 44.2 lbs
 - 8) PART IS SYMMETRIC ABOUT CENTERLINE
 - 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- MACHINING**
- 10) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- BENDING**
- 11) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 7.2% (BASED ON O.D.) IN LOWER HALF OF R85.6 BEND AND 6% (BASED ON O.D.) ON REMAINING TUBE.
 - 12) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- ASSEMBLY**
- 13) INSTALL D2840-1 / D5016-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 880 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
 - 14) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-083-530 RUBBER CUSHIONS TO SECURE THE SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE ON TOP SIDE OF CROSSTUBE.
 - 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS.

RELEASED
2014-05-26

E	D2016-1 WAS D2840-1 (241B). PROSEAL WAS MAGNABOND. NOTE 2: ADD INSPECTION WINDOW. NOTE 11: ALLOW 7.2% CRUSH. NOTE 16: ADD 72HR CURE AND RETORQUE FOR PROSEAL. ADD SHEET 3, CLAMPS REVISSED TO PREVENT CHIPPING (ZN B7-2, B7-3). BEND HEIGHT TOL. NOW 0.38 WAS 0.13 (C1-4). INCORP DEC D-1/2	CP	14.04.01
D	REFORMAT/REVIEW GENERAL NOTES/PART LIST: REFORMAT VIEWS AND REFORMAT DRAWING TO CORRECT DIMENSIONS: ADD 3/4" (ZN D4-2, B4-2); RELOCATED REF AND DIMENSIONS (ZN C8-3 & C4-3; C8-3 & A8-3); RELOCATED FLAG #8; DIMENSIONS (ZN A8-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	08.09.30
C	REMOVE -1000 ABRASION STRIP; ADD MAGNABOND 8388, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATIBILITY WITH BRT1AA	PH	05.02.04
A	GRIND LINES	CP	00.12.12
REV.	NEW ISSUE	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	14.04.01		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D212-864-241			
SHEET 1 OF 6			
TITLE CROSSTUBE ASSY (205/212 HI AFT)			
SCALE NTS			
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13 14 15
D2840-1 SUPPORT
MS21820-28 CLAMP, 2X
D3596-083-530 RUBBER CUSHION, 2X
2 PL

14.00

D212-684-001
BENT TUBE

MASK AREA PRIOR TO PAINTING.
REMOVE MASKING AFTER PAINT
AND APPLY CLEAR COAT

E MS21820-28
CLAMP, REF
14 15

E APPLY PROSEAL
BETWEEN D2840-1 AND
CROSSTUBE

D2840-1
SUPPORT,
REF

D3596-083-530 RUBBER CUSHION
UNDER CLAMP, REF

SECTION A-A
SCALE 4X

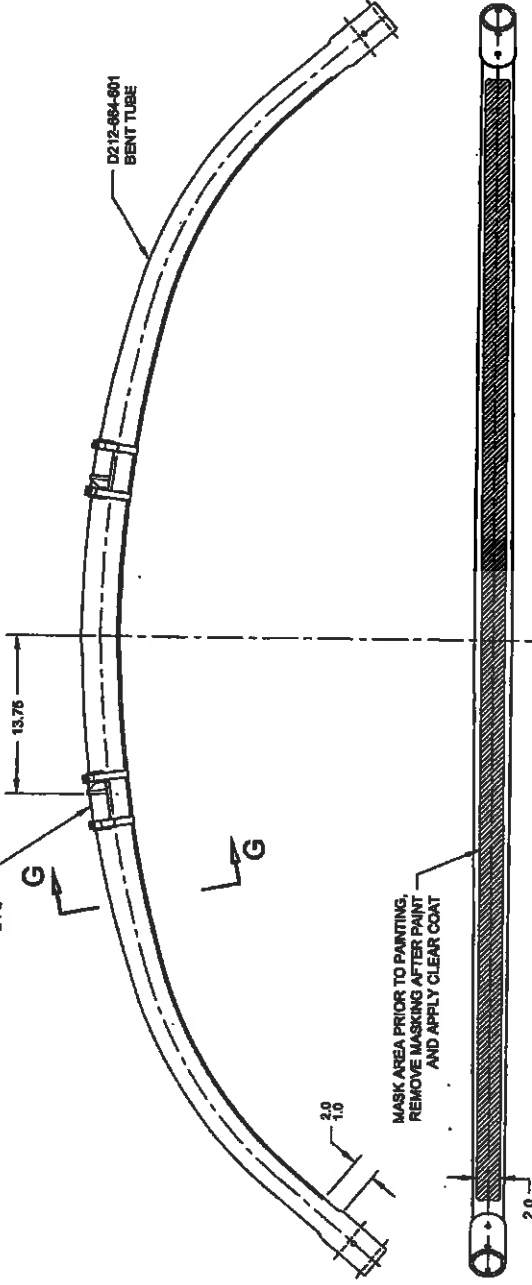
D212-684-241
ASSEMBLY DETAIL

C
SYM

RELEASED
2014-05-26
ND

DESIGN	0	0	DART AEROSPACE LTD
DRAWN	0	0	HAWKESBURY, ONTARIO, CANADA
CHECKED	0	0	DRAWING NO.
MFG. APPR.	0	0	D212-684-241
APPROVED	0	0	REV. E
DE APPR.	0	0	SHEET 2 OF 5
DATE	14.04.01	0	TITLE
		0	CROSSTUBE ASSY (205/212 HI AFT)
		0	SCALE
		0	NTS
		0	COMPONENT 0000 BY DART AEROSPACE LTD
		0	THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES SPECIFIED ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.

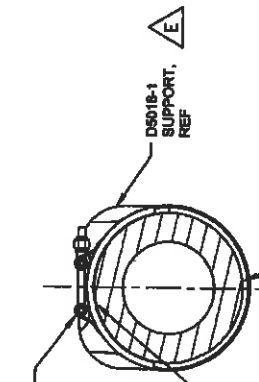
△ E 13 14 15
D5018-1 SUPPORT
MS21020-28 CLAMP, 2X
D3596-063-530 RUBBER CUSHION, 2X
2 PL



MASK AREA PRIOR TO PAINTING.
REMOVE MASKING AFTER PAINT
AND APPLY CLEAR COAT

△ E 13 14 15
MS21020-28
CLAMP, REF

△ E 13
APPLY PROSEAL
BETWEEN D5018-1 AND
CROSSTUBE

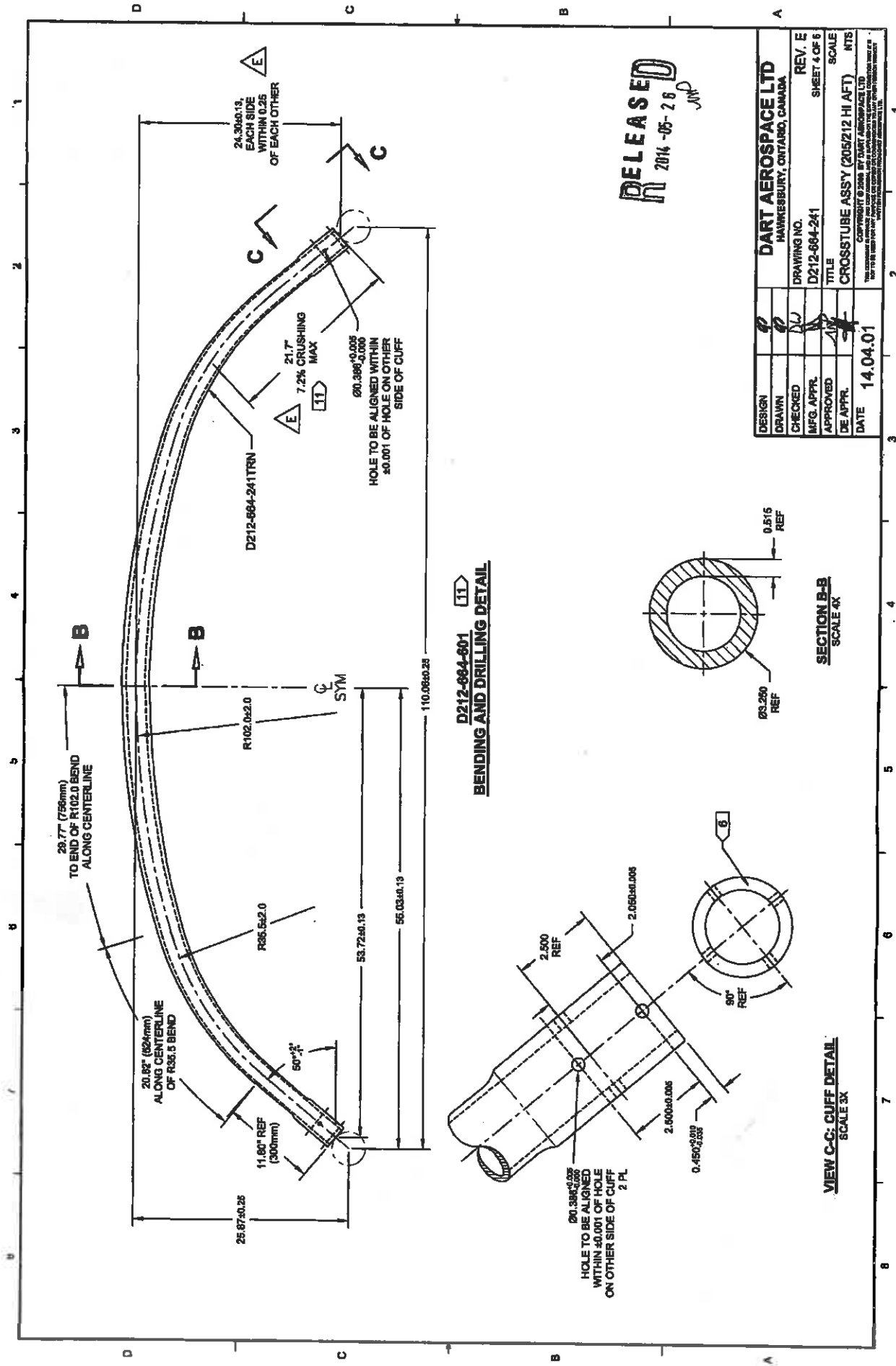


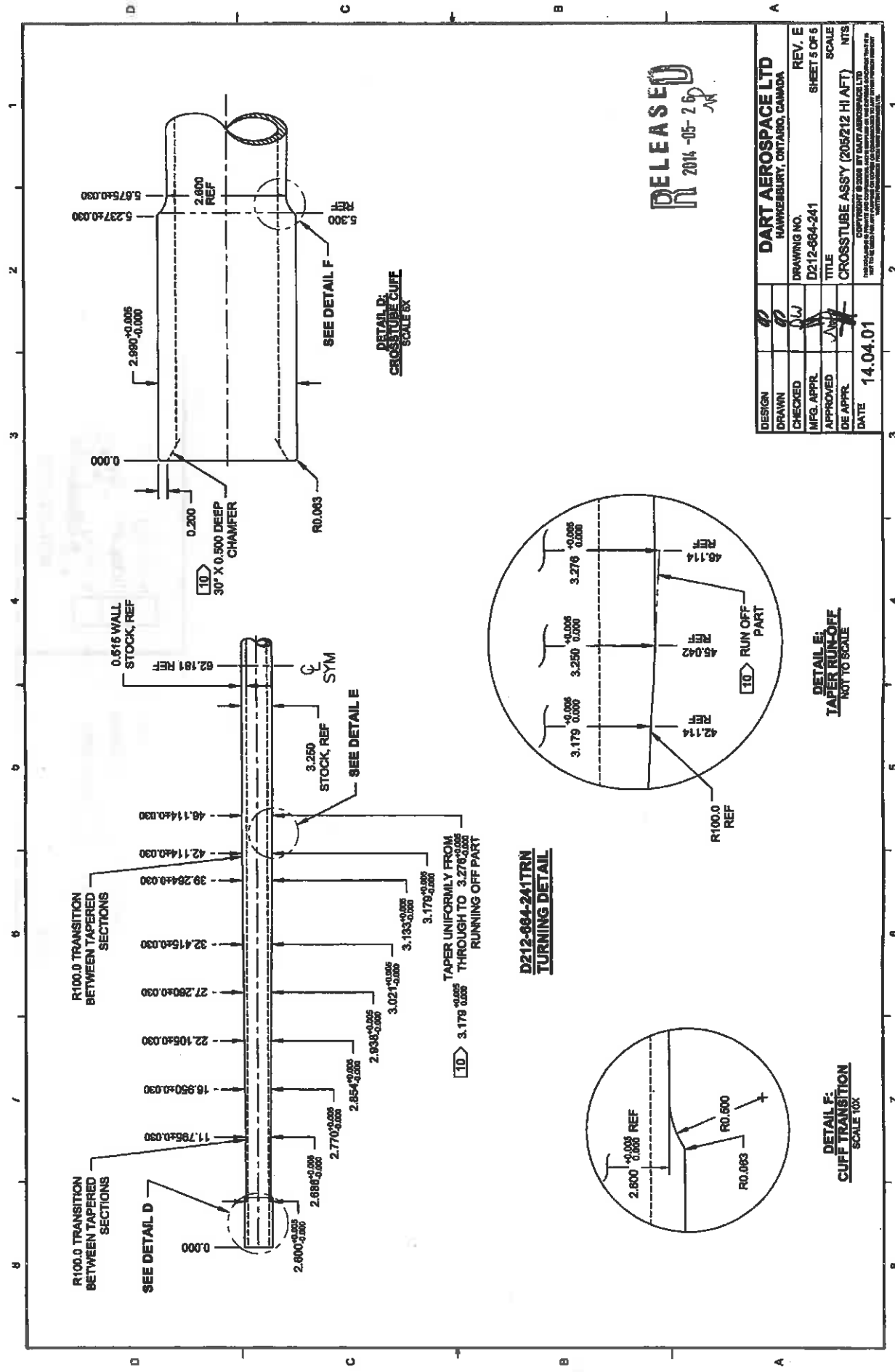
D212-664-241B
ASSEMBLY DETAIL △ E

RELEASED
2014-05-26
JRP

DESIGN	D	DART AEROSPACE LTD
DRAWN	D	HAWKESBURY, ONTARIO, CANADA
CHECKED	D	DRAWING NO.
MFG. APPR.	D	D212-664-241
APPROVED	D	REV. E
DE APPR.	D	SHEET 3 OF 5
DATE	14.04.01	TITLE
		CROSSTUBE ASSY (205/212 HI AFT)
		SCALE
		NTS

SECTION G-G
SCALE 4X





RELEASED
2014-05-26

DESIGN	02	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA REV. E SHEET 5 OF 6 SCALE NTS
DRAWN	02	
CHECKED	02	
INQ. APPR.	D212-884-241	
APPROVED		
DATE	14.04.01	TITLE CROSS-TUBE ASSY (2057212 HI AFT)



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO043007



Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

Attention: Jenne, Heather

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO043007

PO Date: 3/28/19

Due Date: 3/29/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

MAR 28 2019

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	184180	D4464-041	Fuel Tank Assembly : Various STC's ISSUE P/O LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2	Firmed -		3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
							1 X	MAR 29 2019			
2	190172	D212-664-201	Aft Crosstube - High : TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06, DGAC MEXICO STC IA-316/2015 15/06/17 ***WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE *** Issue P/O: LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2	Firmed -		3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
							1 X	MAR 29 2019			
	190173			Firmed -		3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
							2	0	2		\$396.67
Sub Total:							2	0	2		\$396.67



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO043007



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	191403	D212-664-101	Fwd Crosstube - High : TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06, DGAC MEXICO STC IA-316/2015 15/06/17 *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Liquid Penetrant Inspection as per QSI 038 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order	Firmed	-	3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	191405			Firmed	-	3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	191406			Firmed	-	3/29/19	1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
Sub Total:							3	0	3		\$595.00
Grand Total:											\$1,190.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retension of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 3/28/19 3:19 PM dart.lavole.chantal



Work Order Traveler

Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO39775	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO043007 ✓
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT ON:

- ✓ 1 FUEL TANK ASSY, P/N# D4464-041, J/S# 184180
- ✓ 2 AFT CROSSTUBES, P/N# D212-664-201, J/S# 190172, 190173
- ✓ 3 FWD CROSSTUBES, P/N# D212-664-101, J/S# 191403, 191405, 191406

Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-16						MAR 28 2019	
NO CRACK OR LEAK FOUND							
PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923, DEV. MPO11715, UV LIGHT M-20142							
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp	Date:
Name: RAFIK MELIKIAN		MAR 28 2019

Entered:

Date:

and
19 July 2019

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No.

19-7342

Route update only

Job:

190172

Part No.

0212-664-201

Date:

APR 22 2019

Sequence #:

QTY Affected:

1

Description Work Order Deviation

Disposition

-- PART PAINTED WITHOUT "VIEWING WINDOW".

- STRIP AND RE-PAINT AS PER QSI'S

Primer 5143304
clear 5151467
Paint 5155827

DAS
68
9-89

Completed By
AL 19-4-22

Lead hand / Supervisor

7/19/017

QC / QA Coordinator
DAS
68
9-89

Root Cause

Operator	☒
Manufacturing Process	☐
Equip/Tooling	☐
Handling/Preservation	☐
Material	☐
Product Improvement	☐
Process Improvement	☐
Human Factors	☐

FAULT CATEGORY

Pressure/Forced	☐	Contamination	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Bending	☐	Misaligned/off center	☐	Folio/Program	☐	Outside Tolerance	☐
Crushing	☐	BOM/Route	☐	Grain Direction	☐	Drawing	☒
Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Finish	☐
Crimp/Kink/Ripple/Wave/Twist	☐	Incomplete/Unclear Instructions	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Marks/Chatter	☐	Drill Holes	☐	Out of Sequence	☐	Misread	☐
Mislabeled	☐	Fit/Function	☐	Off-set/Set-up	☐		

Other/Details: